



Managing for Commitment: How Human Resource Management Practices Affect Dairy Employee Attitudes

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HRM and Dairy



- Popular press is filled with articles, information, and recommendations about HRM/Labor issues in dairy
- Wisconsin and Michigan dairy managers identified HRM as their primary training need after a major business expansion (Hadley, Harsh, and Wolfe, 2002)
- Survey research with 302 Wisconsin farms that had modernized their operations found that managers were less satisfied with "labor management" issues than with other production related issues (Bewley, Palmer, & Jackson-Smith, 2001)

Purpose of the Study



- To better understand to what extent dairies are using HRM practices
- To describe the effectiveness of particular HRM practices in influencing employee attitudes

Research Questions



1. What human resource management practices are used by dairy farm businesses?
2. What is the relationship between human resource management practices, as perceived by owners and employees, and organizational commitment of employees?
3. What effects do owner, business, and employee demographics have on organizational commitment and perceived organizational support?

Dependent Variable



Organizational commitment. This is a general term that describes "the relative strength of an individual's identification with and involvement in a particular organization" (Mowday, Steers, & Porter, 1979, p. 227).

- *Affective Commitment:* emotional attachment and identification with the organization
- *Normative Commitment:* feelings of obligation
- *Continuance Commitment:* awareness that the costs of going elsewhere are too high (Meyer & Allen, 1997)



Explanatory Variables



- Human Resource Management. These are the policies and practices that organizations use to recruit, train, reward, appraise, and develop employees (Dessler, 2003).
- HR variables measured in employee survey: satisfaction with training, performance review, feedback, and participation
- HR variables measured in owner survey: use of performance reviews, incentives, recruiting and selection tools, standard operating procedures, communication methods, job descriptions, and employee participation
- Other variables: owner, employee, and farm demographics

Methods



- A survey was used to gather information from a large number of businesses
- Dairy businesses with 250 or more cows in PA, NY, OH, MD, and VT were selected to participate
- Each farm owner received a packet containing the owner survey and 3 copies of the employee survey
- All surveys had a return mail envelope attached
- Owners distributed the surveys to their employees

Methods (cont'd)



- Owner survey measured: demographics of owner and farm, and use of human resource management practices
- Employee survey measured: demographics, organizational commitment, perceived organization support, and perceptions of HRM
- Pearson correlation analysis was used to identify initial relationships
- Multiple regression analysis was used to further analyze the predictive power of relationships between explanatory and dependent variables

Response



- 1,083 survey packets sent
- 90 returned due to incorrect addresses, 13 returns indicated they no longer operated a dairy business, leaving 980 in population
- At least one owner or one employee survey was received from 145 businesses, thus farm level response was 14.8%
- Low response rate due to complex survey and sensitive questions in the employee instrument

Table 3-1.
Owner/HR Manager, Employee, and Facility Demographics



	n	Mean	SD	Minimum	Maximum
Owner/HR Manager age	129	47.1	10.5	22	75
Year parlor was built	129	1990	11.5	1958	2003
Year main cow housing barn was built	128	1992	11.2	1936	2004
Number of cows in herd	130	579	434.9	75	4000
Number of employees	129	9.4	6.5	0	34
Employee age	192	36.4	11.1	17	66
Employee tenure with current farm	191	6.7	5.8	0.6	30

Table 3-2.
Owner Level of Education and Facility Type



	Number	Percent of Sample
Highest Level of Education		
Less than high school	5	3.9
High school graduate	36	27.9
Some college or technical school	17	13.2
Associate's degree	25	19.4
Bachelor's degree	40	31.0
Master's degree or higher	6	4.7
Total	129	100.0
Facility Type		
Free stall and parlor	120	96.0
Free stall and flat parlor	2	1.6
Free stall and walk-through parlor	3	2.4
Total	125	100.0

Table 3-3.
Employee Relationship, Ownership, Position Type, and Level of Education



	Number	Percent of Sample
Related to Owner		
Yes	36	18.7
No	157	81.3
Total	193	100.0
Ownership Stake in the Farm Business		
Yes	9	4.7
No	184	95.3
Total	193	100.0
Position Type		
Front-line worker	90	48.1
Supervisor	23	12.3
Middle manager	60	32.1
Senior manager	14	7.5
Total	187	100.0
Highest Level of Education		
Less than high school	19	9.9
High school graduate	95	49.5
Some college or technical school	38	19.8
Associate's degree	19	9.9
Bachelor's degree	18	9.4
Master's degree or higher	3	1.6
Total	192	100.0

Results

Research Question 1: What human resource management practices are used by dairy farm businesses?

Table 4-1.
Use of Employee Selection Methods (n = 128)

Method	n	Percent
Interview	125	97.7
Reference check	101	78.9
Job application	89	69.5
Performance test	22	17.2
Other	0	0.0

Note. Respondents could select more than one method.

Table 4-2.
*Hours of Training Provided to Typical Employees
Over Last 12 Months*

Type	n	Mean	SD	Minimum	Maximum
On-farm training	119	21.8	31.2	0	200
Off-farm training	105	4.7	7.2	0	45

Table 4-3.
Percent of Workforce Receiving Benefits

Benefit	n	Mean	SD	Minimum	Maximum
Workers' compensation	127	97.8	13.4	0	100
Housing or housing allowance	123	45.6	34.0	0	100
Health insurance	127	38.2	35.0	0	100
Use of farm vehicle or machinery	126	37.8	40.1	0	100
Food or meals	127	24.6	39.3	0	100
Retirement plan	127	23.7	34.0	0	100
Life insurance	128	8.1	22.1	0	100

Table 4-4.
Use of Workplace Communication Methods (n = 128)

Method	n	Percent
Staff meetings	87	68.0
Bulletin board	84	65.6
Other	34	26.0
Mission statement	33	25.8
Newsletter	9	7.0

Note. Respondents could select more than one method.

Table 4-5.
Use of Written Standard Operating Procedures by
Work Process (n = 128)

Work Process	n	Percent
Milking	94	73.4
Calf care	70	54.7
Fresh cow care	67	52.3
Feeding	50	39.1
Reproduction	36	28.1
Barn maintenance	23	18.0
Other	18	13.7

Table 4-6.
Mean, Standard Deviation, and Range of Percent of Workforce
Receiving HRM Practices

Practice	n	Mean	SD	Minimum	Maximum
Written job description	125	39	43.4	0	100
Incentive pay or profit-sharing	126	30.6	40.2	0	100
Performance review (annually or more frequently)	128	26.8	38.5	0	100

Variables Significantly Correlated with Affective Commitment

- Level of off-farm training
- Adequacy of initial training
- Adequacy of continuing training
- Satisfaction with training
- Informal feedback was provided
- Satisfaction with feedback
- Satisfaction with performance reviews
- Employee participation

Table 4-12.
Stepwise Regression Results of Affective Commitment
on Employee-reported Explanatory Variables

HRM Practice	Zero Order Correlation	Partial Correlation	SE b	Partial R ²	t value	p
Satisfaction with feedback	0.53	0.23	0.35	0.23	3.73	<.01
Employee participation	0.63	0.06	0.25	0.05	2.69	<.01
Model Summary	n	df	R ²	Adj. R ²	F	p
	119	2, 116	0.27	0.26	21.54	<.01

Table 4-13.
Simple Regression Results of Affective Commitment on
Performance Review Satisfaction

HRM Practice	SE b	t value	p
Performance review satisfaction	0.46	4.35	<.01
Model Summary			
	n = 72	R ² = .21	F = 18.88
	df = 1, 70	Adj. R ² = .20	p < .01

Predictors of Affective Commitment

- Satisfaction with feedback
- Employee participation
- Satisfaction with performance reviews
(analyzed with a smaller subset who received performance reviews)

Variables Significantly Correlated with Normative Commitment

- Adequacy of initial training
- Adequacy of continuing training
- Satisfaction with training
- Informal feedback was provided
- Satisfaction with feedback
- Satisfaction with performance reviews
- Employee participation

Table 4-14.
Stepwise Regression Results of Normative Commitment on Employee-reported Explanatory Variables

HRM Practice	Zero Order Correlation	Partial Correlation	SE b	Partial R ²	t value	p
Employee participation	0.51	0.05	0.25	0.13	2.45	0.02
Satisfaction with feedback	0.45	0.12	0.22	0.03	2.14	0.03
Model Summary						
	n	df	R ²	Adj. R ²	F	p
	119	2, 116	0.16	0.15	11.42	<.01

Table 4-15.
Regression Results of Normative Commitment on Performance Review Satisfaction

HRM Practice	SE b	t value	p
Performance review satisfaction	0.48	4.57	<.01
Model Summary			
	n = 72	R ² = .23	F = 20.93
	df = 1, 70	Adj. R ² = .22	p < .01

Predictors of Normative Commitment

- Satisfaction with feedback
- Employee participation
- Satisfaction with performance reviews (analyzed with a smaller subset who received performance reviews)

Continuance Commitment

- None of the employee-reported or owner-reported HRM practices were significantly correlated with continuance commitment, therefore, no further analysis was conducted

Effects of Demographics on Organizational Commitment

Table 4-24.
Correlation Matrix for Organizational Commitment, Perceived Organizational Support, and Demographic Variables

<u>Dependent Variables</u>	1	2	3	4	5	6	7	8	9	10	11	12	13	
1. Affective Commitment	1													
2. Normative Commitment	.75**	1												
3. Continuance Commitment	.16*	.37**	1											
4. Perceived Org. Support	.76**	.63**	.02	1										
<u>Owner Demographics</u>														
5. Owner's age	-.02	0.01	.03	-.02	1									
6. Owner's level of education	-.05	.01	.03	-.03	-.19**	1								
<u>Business Demographics</u>														
7. Number of cows in the herd	-.08	-.16*	-.19*	-.09	-.11	.18*	1							
8. Number of employees	-.11	-.16*	-.24**	-.12*	-.04	.23**	.83**	1						
<u>Employee Demographics</u>														
9. Employee's age	-.11	-.12	-.13	-.02	.05	.21**	.16*	.16*	1					
10. Employee's level of education	.17*	.05	-.19*	.15*	.03	.11	.03	.09	-.08	1				
11. Employee's position	.19**	.11	-.11	.20**	.01	.09	.08	.20**	.06	.33**	1			
12. Employee tenure	.11	.11	.09	.01	.20**	-.12	-.12	-.08	.26**	-.02	.24**	1		
13. Employee relationship to owner	.15*	.15*	.04	.06	.17*	-.21**	-.20**	-.24**	-.18*	.05	.12	.38**	1	
14. Employee's ownership status	.07	.08	.06	-.02	.06	-.05	-.10	-.09	-.01	.07	.08	.36**	.40**	1

*Correlation is significant at the $p < .05$ level.
 **Correlation is significant at the $p < .01$ level.

*Correlation is significant at the $p < .05$ level. **Correlation is significant at the $p < .01$ level.

Table 4-25.
Stepwise Regression Results of Affective Commitment on Demographic Variables

HRM Practice	Zero Order Correlation	Partial Correlation	SE b	Partial R ²	t value	p
Employee's Position	0.19	0.03	0.13	0.04	1.74	0.084
Employee's relationship to owner	0.15	0.03	0.14	0.02	1.96	0.052
Employee's level of education	0.17	0.02	0.13	0.02	1.69	0.092
Model Summary	n	df	R ²	Adj. R ²	F	p
	176	3, 172	0.07	0.06	4.62	0.004

Table 4-26.
Stepwise Regression Results of Normative Commitment on Demographic Variables

HRM Practice	Zero Order Correlation	Partial Correlation	SE b	Partial R ²	t value	p
Number of Employees	-0.16	0.04	-0.17	0.04	-2.16	0.032
Employee's relationship to owner	0.15	0.02	0.13	0.02	1.65	0.101
Model Summary	n	df	R ²	Adj. R ²	F	p
	173	2, 170	0.05	0.04	4.83	0.009

Table 4-27.
Stepwise Regression Results of Continuance Commitment on Demographic Variables

HRM Practice	Zero Order Correlation	Partial Correlation	SE b	Partial R ²	t value	p
Number of Employees	-0.24	0.07	-0.255	0.0709	-3.41	< .01
Employee's level of education	-0.19	0.02	-0.1524	0.0231	-2.04	0.0431
Model Summary	n	df	R ²	Adj. R ²	F	p
	166	2, 163	0.09	0.08	8.46	< .01

Conclusions

- Feedback Satisfaction (and Performance Review Satisfaction) and Employee Participation emerged as important predictors of organizational commitment
- Demographic factors were not as important (This is good news because these are harder to change)

Performance Feedback

- Managers need to talk with employees about their performance, they especially need to offer positive feedback
- Automatically provided feedback systems (milking, feeding, manual performance records) can also be an important source of performance information



"The more feedback I receive the better I can do. Whether formal or informal, positive or negative it's a motivator."

-- Pennsylvania Middle Manager

"My feedback is well seen by record on PC Dart DHIA for employer and I."

-- Pennsylvania Middle Manager

Employee Participation



- Employees want to have their minds engaged as well as their hands
- They want to feel like they have influence over their own work
- Managers should seek input from employees when making decisions that affect their work area
- High potential employees need increasing responsibility so that they can grow

"I have worked for a long time at the farm and know how mostly everything is done. My boss kind of leaves me in charge when he is away or lets me make some decisions on my own."

-- Pennsylvania Front-line Worker

"Closely involved with decision making and expansion/improvement plans. As herdsman I have a fair latitude in how I manage the cows - the owner trusts and respects my decisions."

-- New York Senior Manager

Qualitative Findings About Commitment



- Top 3 most frequently mentioned sources of commitment were:
 - The owners are good people
 - The work or the animals
 - Responsibility, respect, and participation
- This fits closely with the quantitative findings

Respondent 1952a: The owners make you feel important, and they make an effort to care about you. They also help you in any way they can and value your input and opinions.

HUMAN RESOURCE MANAGEMENT AND DAIRY EMPLOYEE ORGANIZATIONAL COMMITMENT

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PURPOSE

The purpose of this research was to gather information about human resource management (HRM) practices that were used in dairy farm organizations and the effects these practices had on employees' feelings of commitment toward the organization.

WHAT IS HUMAN RESOURCE MANAGEMENT (HRM)?

HRM is the set of practices that businesses use to ensure that they have an effective workforce in place to meet operational needs. HRM practices included in this study were selection, benefits, training, performance feedback, communication systems, standard operating procedures (SOPs), and employee participation.

METHODS

In February 2005 a survey was sent to owners and employees of dairies with herd sizes of 250 or larger in the states of PA, NY, MD, OH, and VT. Owners or HR managers from 131 farms completed the owner survey. Owners distributed an employee-focused survey and 201 employees responded with information about their attitudes toward the business and their perceptions of HRM practices. All surveys were returned anonymously. Farm-level response rate was 14.8%.

WHAT IS ORGANIZATIONAL COMMITMENT?

Organizational commitment is the relative strength of an employee's attachment or involvement with the organization where he or she is employed, in this case the dairy business. Organizational commitment is important because committed employees are less likely to leave for another job and are more likely to perform at higher levels. There are three dimensions of organizational commitment:

- Affective commitment is a feeling of emotional attachment. For example, "I work here because the people are great and the work is fun."

- Normative commitment is a feeling of obligation. For example, “I work here because they hired me when I needed a job so I owe it to them.”
- Continuance commitment is a feeling that the costs of leaving are too high or it is too much trouble to go somewhere else. For example, “I’d leave if I knew I could get another job that paid as much.”

Obviously, an employer wants valuable employees to feel affective commitment, normative is OK too, but continuance commitment may not be desirable. Does a dairy owner really want an employee who only stays because the prospects of going elsewhere are dismal?

WHAT HRM PRACTICES WERE DAIRIES USING?

Selection. Most dairies used interviews, reference checks, and job applications to choose among jobs applicants, but only 17% used a performance test. The dairies had an average of 3.7 candidates for the position they hired most often.

Training. There was great variation in how much training dairies provided, in part because dairies defined training differently. On average, employees received 22 hours of on-farm training and almost 5 hours of off-farm training in the 12 months prior to the survey.

Benefits. Almost all of the dairy workforce in the Northeast had access to workers’ compensation, while nearly half received housing or a housing allowance. Just under 40% had health insurance and access to farm vehicles or machinery. About a quarter of the workforce received food or meals and some form of retirement plan. Pay rates were not measured in this study.

Communication Methods. Staff meetings (68%) and bulletin boards (66%) were the most common communication methods used. Twenty-six percent of respondents wrote in another method of communication under the “Other” category. Those who wrote “other” mainly meant one-on-one verbal communication, but there were comments about written notes sometimes being included with the paycheck. The use of interpreters was also a means of formal communication.

Standard Operating Procedures (SOPs). SOPs have gained widespread use among larger dairies, mainly for milking. The table below shows how SOPs were used for different work processes.

Table 1. Use of Written Standard Operating Procedures by Work Process (n = 128)

Work Process	n	Percent
Milking	94	73.4
Calf care	70	54.7
Fresh cow care	67	52.3
Feeding	50	39.1
Reproduction	36	28.1
Barn maintenance	23	18
Other	18	13.7

Other HRM Practices. Written job descriptions were in place for about 39% of the dairy workforce. Just over 30% of the workforce received some kind of incentive pay or profit-sharing, and about 27% of the workforce received a formal performance review at least once a year.

WHICH HRM PRACTICES WERE RELATED TO ORGANIZATIONAL COMMITMENT?

We received information from both dairy employees and owners about HRM practices. The owner information focused on objective, measurable practices such as how much training was provided or if SOPs were used. Information from employees was more subjective, focusing on employees' perceptions of HRM practices in the dairy. The first step in our analysis was to see which of the HRM practices were correlated with organizational commitment.

The only owner-reported HRM practice that was correlated with commitment was the level of off-farm training, those receiving more off-farm training tended to be more committed. Employee-reported HRM practices that were correlated with commitment were measures of satisfaction with training, performance feedback, and employee participation. Table 2 lists the HRM practices that were correlated with the three dimensions of organizational commitment.

Table 2. HRM practices that were significantly ($p < .05$) correlated with affective, normative, or continuance commitment

Affective	Normative	Continuance
<ul style="list-style-type: none"> • Level of off-farm training • Adequacy of initial training • Adequacy of continuing training • Satisfaction with training • Informal feedback was provided • Satisfaction with feedback • Satisfaction with performance reviews • Employee participation 	<ul style="list-style-type: none"> • Adequacy of initial training • Adequacy of continuing training • Satisfaction with training • Informal feedback was provided • Satisfaction with feedback • Satisfaction with performance reviews • Employee participation 	<p>None of the HRM practices were correlated with continuance commitment</p>

WHICH HRM PRACTICES WERE STRONG ENOUGH TO PREDICT ORGANIZATIONAL COMMITMENT?

We conducted further statistical analysis to uncover which variables might *predict* affective and normative commitment. (No further analysis was conducted with continuance commitment because no HRM practices were correlated with it.) We found that dairy employees who were satisfied with the feedback they received and who felt that they had opportunity to participate in work by offering input and being involved in decisions were more likely to feel both affective and normative commitment. Among those who received formal performance reviews, satisfaction with reviews predicted the same dimensions of commitment. These findings are summarized in Table 3.

Table 3. HRM practices that were significant ($p < .05$) predictors of affective, normative, or organizational commitment

Affective	Normative
• Satisfaction with feedback	• Employee participation
• Employee participation	• Satisfaction with feedback
• Satisfaction with performance reviews*	• Satisfaction with performance reviews*

* Note. This group was analyzed with a smaller subset because not all employees received performance reviews.

DO DEMOGRAPHIC FACTORS PREDICT ORGANIZATIONAL COMMITMENT?

In addition to information about HRM practices we also collected demographic information about the dairies, the owners, and the employees. We wanted to know if other factors such as the type of dairy facility, herd size, job type, or educational levels of owners or employees would influence organizational commitment. There were relationships between organizational commitment and demographic variables, but the connections were much weaker than with the HR practices of feedback, participation, and performance reviews.

Employees who were in higher positions, were related to the owner, and had higher education tended to feel more affectively committed to the dairy where they worked. Employees on dairies with a greater number of employees felt less normative and continuance commitments. Employees with more education also felt less continuance commitment to the dairy where they worked. Finally, normative commitment was higher among employees who were related to the owner.

WHAT DID EMPLOYEES SAY ABOUT WHY THEY FELT COMMITTED?

Employees also had the opportunity to write in their responses about why they felt committed to the dairy where they worked. These responses were combined and analyzed in order to identify common themes. The most common reasons employees gave for their feelings of organizational commitment were: (1) because the owners were good people, (2) because they enjoyed the work or the animals, or (3) because they were given responsibility, opportunity to participate, or they were shown respect. A few example comments include:

- *“The owners make you feel important, and they make an effort to care about you. They also help you in any way they can and value your input and opinions.”*
- *“I love working with calves and cows and other employees.”*
- *“I am treated with respect and made to feel like an important part of the farm picture. The owners make every attempt to do what they can for me and in return I try to do the same for them.”*

CONCLUSIONS

This research confirms what many other organizational studies have found: good communications are critical to an effective workplace environment. Performance feedback is a key part of this communication. Dairy producers who want to increase organizational commitment among employees should ensure that employees receive feedback about their performance. This feedback may include frequent, informal performance discussions with a supervisor, access to performance data, and formal periodic performance reviews.

Participation in work by offering suggestions and joining in decisions was very important to employees. In this study, the level of participation that employees felt predicted their level of organizational commitment. Analysis of employee comments supported the statistical findings. Dairy owners seeking to build commitment, especially in key employees, should make sure that employees have chances to offer input and influence decision making whenever possible.

Finally, it is important to note that simply implementing HRM practices such as benefits, job descriptions, or SOPs is not enough to earn employee commitment. In order to enjoy the benefits of a committed, and therefore stable and high-performing workforce, dairy producers must offer a workplace with effective performance feedback and opportunities for participation.

REFERENCES

- Stup, R.E. 2006. Human resource management, organizational commitment, and perceived organization support in dairy farm businesses. Unpublished doctoral dissertation. Pennsylvania State University: University Park, PA.